REMARKS

Claims 1-2, 4-8, 17-22 and 24-28 remain pending. Claims 3, 9-16, 23 and 29-44 were previously withdrawn. Claims 1 and 17 have been herein amended. Applicants respectfully submit that no new matter has been added by this Reply. Accordingly, Claims 1-2, 4-8, 17-22 and 24-28 are at issue.

The present invention is drawn to a system for improving communication throughout a network. Referring to exemplary Claim 1, the network has a module capable of changing state, and in response to that change, transmitting a message. The system detects an error, calculates a bit error rate and calculates a residual error probability. Lastly, based on the residual error probability, the system retransmits a first type of messages and shortens the length of that type of messages, but does not perform one of those actions on a second type of messages. The present invention thus has the ability to distinguish between different *types* of messages. Specifically, in response to the probability of the continuation of network errors, a first *type* of messages is shortened and retransmitted, while a second *type* of messages is not retransmitted and/or shortened.

As will be demonstrated herein, the prior art cited by the Examiner in the December 19, 2005 Office Action does not disclose, anticipate or suggest each and every element of the claims of the present application.

Remarks Concerning Applicants' Election

On page 2 of the December 19, 2005 Office Action, the Examiner stated that Applicants' election of Group I (Claims 1, 2, 4-8, 17-22 and 24-28) in the October 14, 2005 Reply will be treated as an election made without traverse. Applicants do not object to the Examiner's proposed treatment of the election.

Remarks Concerning Rejections Under 35 U.S.C. § 112

On pages 2-3 of the December 19, 2005 Office Action, the Examiner rejected Claims 1, 2, 4-8, 17-22 and 24-28 under § 112, ¶ 2, for failing to particularly point out and distinctly claim

the subject matter of the invention. Specifically, the Examiner found the phrase "without at least one of retransmitting and shortening the length of a second type of messages" to be non-compliant with § 112. That phrase is in Claims 1 and 17, which have been herein amended so that the phrase "at least" is no longer a part of that limitation. The limitation is now "without one of retransmitting and shortening the length of a second type of messages". In light of that amendment, Applicants respectfully traverse that rejection.

It will be understood that various types of messages are communicated through a communications network, and that communications errors occur in those networks for various reasons. In response to the rate of those errors and the likelihood of their occurrence in the future, the present invention executes a corrective action on a first type of messages. Specifically, the present invention shortens the length of, and retransmits, the first type of messages. However, the present invention does not execute one or both of those actions on a second type of messages. In other words, the second type of messages is either not shortened, not retransmitted, or both. Applicants respectfully submit that the phrase "without one of retransmitting and shortening the length of a second type of messages" particularly and distinctly claims that aspect of the present invention. Claims 1 and 17, as amended, are therefore compliant with § 112, ¶ 2. The remaining claims of the present application are dependent on either Claim 1 or Claim 17, as amended, and therefore satisfy the requirements of § 112 for the same reasons. Applicants thus respectfully request that the rejection be withdrawn.

Remarks Concerning Rejections Under 35 U.S.C. § 103

Dintelmann in view of Labonte

On pages 3-4 of the December 19, 2005 Office Action, the Examiner rejected Claims 1, 17 and 18 under § 103(a) as being unpatentable over U.S. Patent No. 6,256,496 to Dintelmann et al. ("Dintelmann") in view of U.S. Patent No. 5,828,672 to Labonte et al. ("Labonte"). Applicants respectfully traverse that rejection.

Dintelmann is directed to a digital radio communication apparatus for communicating via a satellite-supported network. Various stations on the network communicate through a hub, which assigns the stations, upon request, a secure frequency having a higher transmission rate

than normal communication traffic. As the Examiner acknowledged on page 4 of the December 19, 2005 Office Action, Dintelmann does not disclose the steps of calculating a raw bit error rate and correlating a residual error probability in response to the detected error rate.

Dintelmann also does not disclose performing a corrective action on a first *type* of messages, while not performing the action on a second *type* of messages, as required by both Claims 1 and 17. Dintelmann discloses a corrective action (col. 5, ll. 59-62), but that corrective actions is executed on *all* messages, regardless of their type. The present invention distinguishes between types of messages. Dintelmann does not disclose that element. Applicants respectfully acknowledge that Dintelmann *does* disclose the mere existence of different types of messages (col. 5, ll. 40-51; Abstract), but those messages are handled the same by the Dintelmann system regardless of their type. In other words, Dintelmann does not distinguish between the various types of messages when determining whether to shorten or retransmit a message. The system described by Dintelmann treats all messages uniformly, without regard to their type.

Labonte fails to cure the deficiencies of Dintelmann. Labonte is directed to a system for determining when a radio telecommunications network should switch between first and second grades of service. However, like Dintelmann, Labonte does not disclose any way to distinguish between first and second types of messages. The Examiner previously acknowledged that deficiency in Labonte on pages 6 and 8 of the May 31, 2005 Office Action.

Neither Dintelmann nor Labonte discloses the step of shortening and retransmitting a first type of messages, while not executing at least one of those actions on a second type of messages. Claims 1 and 17 both include that limitation, and are therefore patentable over the combination of Dintelmann and Labonte. Claim 18 is dependent on Claim 17, and is therefore patentable for the same reasons. Applicants thus respectfully request that the rejection based on those references be withdrawn.

Applicants further respectfully submit that the combination of Dintelmann and Labonte is improper because there is no motivation or incentive in the prior art to combine those references in the manner suggested by the Examiner. See *In re Napier*, 55 F.3d 610, 613; 34 U.S.P.Q.2d 1782, 1785 (Fed. Cir. 1995). Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where a teaching, suggestion or motivation to do so is found either in the references themselves or in the knowledge generally

available to one or ordinary skill in the art. *In re Fine*, 837 F.2d 1071; 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347; 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992).

The teaching or suggestion to make the claimed combinations and a reasonable expectation of success of that combination must both be found in the prior art, not in the applicant's disclosure, *In re Vaeck*, 947 F.2d 488; 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness, MPEP § 2142. In the present case, the Examiner has failed to meet that burden. Instead, the Examiner has simply concluded one skilled in the art would make the suggested modification. That is insufficient.

The Examiner has opined that there is an incentive to combine Dintelmann and Labonte because "one of ordinary skill in the art would have recognized that use of calculating a raw bit error rate and correlating a residual error probability in response to the detected error rate would have provided a means for calculating the bit error rates required in Dintelmann for decisions on retransmission" (p. 5, December 19, 2005 Office Action). However, that incentive is not found in any of the cited references. It is instead simply a hindsight determination, which is an improper foundation upon which to combine references.

Hindsight combination of references, using the present invention as a roadmap, is improper. It is well recognized that the claimed invention cannot be used as an instruction manual or template to piece together the teachings of the prior art in an attempt to render the claimed invention obvious, *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992). Applicants therefore respectfully submit that the combination of the Dintelmann and Labonte references is improper. For that reason, in addition to the fact that Dintelmann and Labonte do not disclose the elements of the claims of the present invention, Applicants respectfully request that the rejection based on those references be withdrawn.

Dintelmann and Labonte in view of Wicker

On page 6 of the December 19, 2005 Office Action, the Examiner rejected Claims 2 and 22 under § 103(a) as being unpatentable over Dintelmann and Labonte, in further view of the article "Error Control Systems for Digital Communication and Storage" by Wicker ("Wicker"). Applicants respectfully traverse that rejection.

As discussed previously, neither Dintelmann nor Labonte discloses the step of retransmitting and shortening a first *type* of message while not performing at least one of those actions on a second *type* of message. Wicker fails to cure that deficiency.

Wicker teaches an error control system for digital communication. Specifically, Wicker presents an algorithm for transmitting messages within a predetermined error threshold. However, like Dintelmann and Labonte, the system presented by Wicker applies to *all* types of messages on the network and does not discriminate between message types. All three of the references discuss systems and methods for reducing network transmission errors. But none of the references discloses a way to distinguish between different types of messages. None of the references discloses retransmitting and shortening the length of a first *type* of message while not executing at least one of those actions on a second *type* of messages. Claims 1 and 17 of the present application include that limitation. Claim 2 is dependent on Claim 1, and Claim 22 is dependent on Claim 17. Claims 2 and 22 therefore are patentable over the combination of Dintelmann, Labonte and Wicker. Applicants thus respectfully request that the rejection based on those references be withdrawn.

Dintelmann, Labonte and Wicker in view of Mangold

On page 7 of the December 19, 2005 Office Action, the Examiner rejected Claims 5-8, 19-21 and 25-28 under § 103(a) as being unpatentable over Dintelmann, Labonte and Wicker, in further view of U.S. Patent No. 5,926,232 to Mangold et al. ("Mangold"). Applicants respectfully traverse that rejection.

Mangold does not cure the deficiencies of Dintelmann, Labonte and Wicker. Mangold is directed to a method for optimizing the transmission of signals over a channel with a predetermined channel data rate. To correct for errors in bit data, Mangold includes "redundant bits"; i.e., transmitting copy bits in case some bits are lost. Like Dintelmann, Labonte and Wicker, Mangold does not disclose a system in which different *types* of network messages are treated differently. The redundant bit system disclosed by Mangold applies to *all* network messages, and is not applied to one type of network message alone.

The present invention distinguishes between different types of messages, and executes a corrective action on a first type, while not executing at least part of that corrective action on a

second type. Claims 1 and 17 both require retransmitting and shortening a first type of message, and not executing at least one of those actions on a second type of message. None of the cited prior art discloses that feature. Claims 5-8 are dependent on Claim 1, and Claims 19-21 and 25-28 are dependent on Claim 17. Therefore, Claims 5-8, 19-21 and 25-28 are all patentable over Dintelmann, Labonte, Wicker and Mangold for the same reasons as are Claims 1 and 17. Applicants therefore respectfully request that the rejection based on those references be withdrawn.

Moreover, Mangold discloses a fixed length transmission system, in which all transmitted messages are of a fixed and equal length. The Examiner previously observed that limitation on page 8 of the May 31, 2005 Office Action. It is therefore not possible to combine Mangold with Dintelmann. The redundant bit system of Mangold could not be combined with the variable block system of Dintelmann, because the Mangold system requires each block to be of equal and fixed length. The combination of Dintelmann and Mangold is therefore improper. For that additional reason, Applicants respectfully request that the rejection be withdrawn.

Dintelmann, Labonte, Wicker and Mangold, in further view of Schroeder

On pages 11-12 of the December 19, 2005 Office Action, the Examiner rejected Claims 4 and 24 under § 103(a) as being unpatentable over Dintelmann, Labonte, Wicker and Mangold, in further view of U.S. Patent No. 5,933,111 to Schroeder et al. ("Schroeder"). Applicants respectfully traverse that rejection.

As noted previously, neither Dintelmann, Labonte, Wicker nor Mangold discloses the step of retransmitting and shortening a first type of messages, and not performing at least one of those actions on a second type of messages, which is a limitation of both Claims 1 and 17. Schroeder fails to cure that deficiency.

Schroeder is directed to an apparatus and method for detecting an antenna mispointing condition of an earth station. However, Schroeder does not disclose the step of retransmitting and shortening a first type of message based on a detected bit error rate, which is required by both Claims 1 and 17. Neither Dintelmann, Labonte, Wicker, Mangold nor Schroeder, either alone or in combination, discloses the step of retransmitting and shortening a first type of messages in response to a detected error rate, and not executing at least one of those actions on a
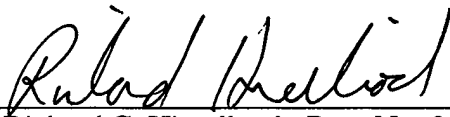
second type of messages. Claims 1 and 17 of the present application require that feature. Claim 4 is dependent on Claim 1, and Claim 24 is dependent on Claim 17. Accordingly, Claims 4 and 24 are patentable over Dintelmann, Labonte, Wicker, Mangold and Schroeder. Applicants therefore respectfully request that the rejection based on those references be withdrawn.

CONCLUSION

In light of the remarks made herein, Applicants respectfully submit that Claims 1-2, 4-8, 17-22 and 24-28 are in condition for allowance. Applicants respectfully request that the Examiner withdraw the rejections and allow the claims to issue. If it may be of assistance to contact the undersigned attorney regarding the present invention, the Examiner is invited to do so. The Commissioner is hereby authorized to charge Deposit Account No. 23-0280 in connection with any fees associated herewith.

Respectfully submitted,

Dated: 3/20/06   By: _Richard C. Himelhoch_

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